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(54) SHELF STRUCTURE

Robert G. Chesley, Farmington, Michigan, U.S.A.

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S P E C I F I C A T I O N

This invention relates to shelf structures for displaying retail merchandise.

The shelf structure is of a type which is in use in retail stores for displaying merchandise. The basic unit includes a pair of vertical upright members which are secured to a wall in spaced apart relationship and are provided with a plurality of vertically spaced slots. The slots in the upright members are to receive parts of shelf brackets to support the brackets at any desired vertical level. The brackets support a shelf for receiving
10 retail merchandising.

The upright members of the shelf structures are usually made of sheet metal of varying thicknesses and of different cross sectional configurations. It is therefore necessary to provide brackets which will be properly supported on the upright members regardless of the thickness or configuration of the upright members.

The present invention solves the above problem by providing a shelf bracket having an arrangement which permits mounting of the shelf bracket on any of the wide variety of upright members which have previously been installed in retail stores.

20 It is therefore an object of my invention to provide a shelf structure having improved facilities for mounting one of its supports to another thereof.

Another object of my invention is to provide an improved shelf structure having brackets provided with hook or incline lug-shaped members and lock members so that the brackets may be firmly secured to upright structures of varying wall thicknesses.

Other objects of this invention will appear in the following description and appended claims, reference being had to the accompanying drawings forming a part of this specification



wherein like reference characters designate corresponding parts in the several views.

In the Drawings:

Figure 1 is a perspective view of the shelf structure embodying features of my invention;

Figure 2 is a fragmentary view taken in the direction of the arrows of Figure 1;

Figure 3 is a view the same as Figure 2 with the thickness of an upright support member being greater than that shown in
10 Figure 2; and

Figure 4 is a fragmentary front view of the shelf shown in Figure 1 with a display card removably held in position by wires of the shelf.

Before explaining the present invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and arrangement of parts illustrated in the accompanying drawings, since the invention is capable of other embodiments and of being practiced or carried out in various ways. Also, it is to be understood that the phrase-
20 ology or terminology employed herein is for the purpose of description and not of limitation.

In accordance with my invention I provide an improved shelf structure which permits replacement of worn out parts with the assurance that such parts will be useable to cooperate with the remaining parts to provide a sturdy structure for supporting any and all types of retail merchandise. In general the shelf structure includes shelf supporting brackets having hook or inclined lug members and lock members which brackets support and connect the shelf properly to the usual upright members with the

hook members having provisions to compensate for different wall thicknesses of the upright members so that replacement brackets will be firmly clamped to the upright members.

Referring to the drawings the numeral 10 designates in general my improved shelf structure which includes spaced apart upright members or structures 12 secured to a supporting wall 14 by screw 15. The shelf structure includes two identical sectional shelf-supporting spaced apart brackets 16. A wire shelf 18 is supported on the brackets 16.

10 The two upright members 12 are channel sections having legs 20 and 22 joined together by a web 24. A plurality of vertically spaced generally rectangular openings 30 are provided in the web 24. The openings permit mounting of the brackets 16 at different vertical positions whereby the shelf 18 may be located at any desired vertical level. The two uprights 12 shown are identical.

20 The sectional brackets 16 each include a main or shelf supporting section 34 and an adjuster or locking section 36. The main section is preferably made of sheet metal and is provided with a vertically extending indented portion 38 at end 39. The adjuster section is provided with an elongated slot 46 and is secured to the main section 34 by bolt 48 in the indented portion 38 to provide for adjustable vertical movement of the adjuster portion 36. The adjuster portion 36 has a horizontally extending lug or arm 50 which extends into one of the openings 30 of web 24 for engagement with the web 24. The main bracket on its upper portion is provided with a lug or hook 56 including a laterally projecting portion 58 and a downwardly projecting portion 60 which is provided with an outwardly inclined portion 62 adjacent the major portion of the main section 34 but spaced slightly therefrom. It will be noted that the

inclined portion 62 diverges downwardly and outwardly away from the end 39 of the main bracket 36 with the uppermost portion thereof being spaced by the laterally projecting portion 58 from the end 39 to permit the lug 56 to extend over the web 24 as shown in Figure 2. The inclined portion 62 and the end 39 form an angular notch which is wider at its lower opening end so that when the lug 56 is inserted into an opening 30 the bracket 34 with the lug 56 may be moved downwardly until the inclined portion engages the inner wall of web 24. This engagement takes place at the point on the inclined portion 62 which engages the inner wall of web 24. The thickness of wall of the web 24 determines when the inclined portion engages the inner portion of the wall of web 24. As shown in Figure 2 the uppermost portion of the inclined portion 62 is in engagement with the inner wall of web 24. At this time the end 39 is in engagement with the outer wall of web 24. To lock the bracket 16 to upright 12 the adjuster member 36 may be adjusted so that the arm or lug 50 engages a wall of web 24 surrounding one of the openings 30. As shown in Figure 2 the arm 50 is moved to the upper portion of one of the openings 30 to engage the web 24. If desired the arm 50 may be moved downward in one of the openings 30 to engage the web 24. In the latter position of arm 50 the bracket 16 will be locked in position against downward movement. Thus the brackets 16 are locked in position to the uprights 12 of certain wall thickness due to the inclined portion 62 of hook 56 and arm 50 of adjuster member 36.

In Figure 3 the brackets 16 are secured to uprights 70 having openings 71. The uprights 70 are the same as uprights 12 with the exception of the webs 72 of uprights 70 which are of greater thickness than webs 24 of uprights 12. In this instance

the incline portion 62 engages the inner wall of web 72 between the upper and lower portion of said incline portion 62 to secure the brackets to uprights of wider wall thickness.

By use of the arrangements shown in Figures 2 and 3 the brackets 16 with the adjustable locking arm 50 and the incline 62 on the hook 56 it is readily adaptable for use on upright supporting structures of varying wall thicknesses.

The wire shelf is supported on the upper edges of the brackets 16. The shelf 18 includes a rectangular frame 80, transverse wires 82 and wires 84 extending substantially parallel to the brackets 16. One of the transverse wires 82 is mounted above the main portion of the frame 80 at the front of shelf 18. The front ends of wires 84 are partially looped around this upper transverse wire leaving space for the insertion of a sales item card 88 as shown in Figure 4. The shelf is secured to the brackets by clamps 90.

From the foregoing, it will be noted that I have provided a shelf structure which may be readily installed or removed and one in which the shelf structure brackets will fit supporting elements of various wall thicknesses.

Although only preferred forms of the invention have been illustrated, and those forms described in detail, it will be apparent to those skilled in the art that various modifications may be made therein without departing from the spirit of the invention or from the scope of the appended claims.

THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. A shelf structure for securement to spaced apart up-rights, said uprights each including a wall portion having a plurality of vertically spaced openings therein, said shelf structure including shelf-support brackets, said brackets each including on its upper end a hook member defining an angular slot with an inclined portion diverging downwardly and away from the end of the bracket, said hook member being for insertion through a selected one of the upright openings, said slot being wider at its lower opening end and inclined upwardly to provide varying widths to meet the thickness of the upright member with the inclined portion engaging the rear wall of the upright and the end of the bracket engaging the front wall of the upright and a locking member on the lower end of said bracket for engagement with the upright, one of said members being adjustable.

2. In a shelf structure comprising a plurality of upright supports securable to a wall in spaced apart relation and having vertically spaced apart openings, shelf support brackets each being secured on one end only to said upright supports and including a hook member on the upper portion of each bracket extending through an opening in a respective upright support to secure a bracket to an end upright support with the end of the bracket in engagement with the upright support, a lug member on the lower end of each bracket and received in openings in the upright supports and engaging the upper ends thereof to prevent vertical movement of said brackets, one of said members being vertically adjustable with respect to the other member to facilitate securement of the shelf support brackets to upright supports in which said vertically spaced openings are spaced apart different distances and a shelf carried by said brackets.

3. A shelf structure as defined in Claim 2 wherein the adjustable member is movable vertically with respect to the end

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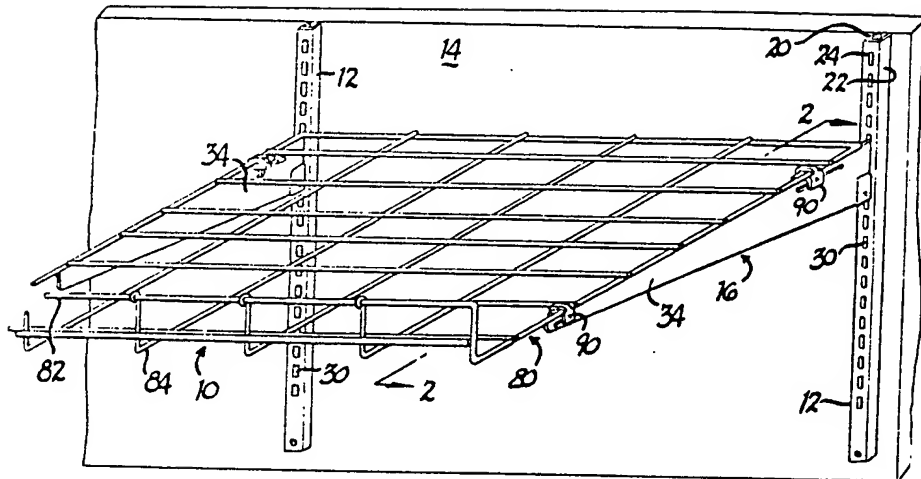


FIG. 1

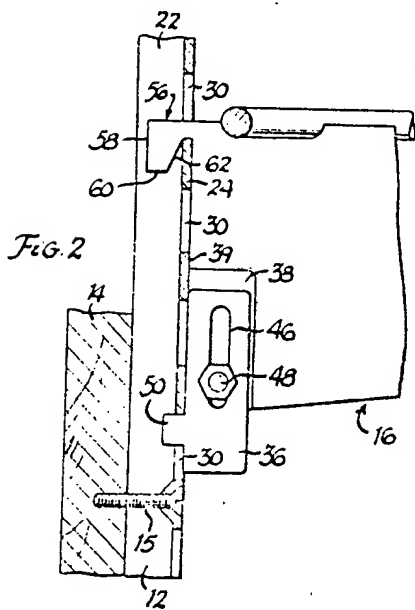


FIG. 2

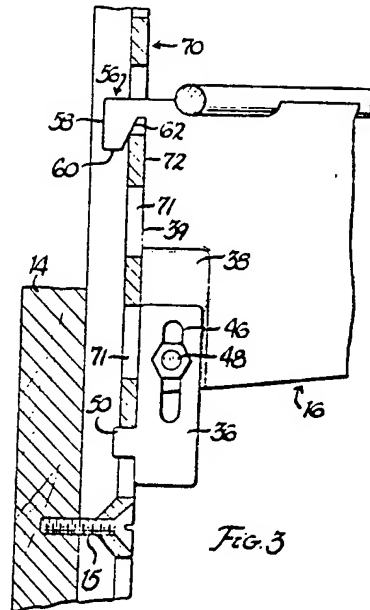


FIG. 3

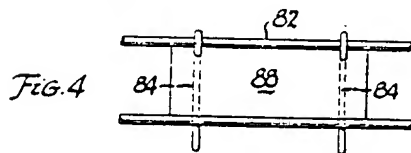


FIG. 4

of the bracket.

4. A shelf structure as defined in Claim 2 wherein each lug member on the lower end of each bracket is the adjustable member vertically relative to the end of each of the brackets.

5. A shelf structure comprising a plurality of upright supports securable to a wall in spaced relation and each having vertically spaced apart openings in a wall thereof, shelf support brackets each being secured on one end only to said upright supports and including a hook member on the upper end thereof and having a portion extending through one of said openings and a downward extending portion engaging the rear wall of an upright support to support an end of a bracket against the front wall of an upright support, a locking arm member on the lower end of each bracket and extending through a lower opening on an upright support and having vertically adjustable means to cooperate with a respective upright support to lock a bracket end to an upright support and a shelf carried by said brackets.

6. A shelf structure as defined in Claim 6 wherein the lower end of the bracket is indented adjacent the upright support in a vertical direction and said means includes a slot in the arm member and a bolt which extends through said slot to carry the locking arm in the indented portion for vertical adjustment.

7. A shelf structure as defined in Claim 5 wherein the downward extending portion of the hook member is on an incline to engage the rear wall of the upright support on the inclined portion of the downwardly extending portion of the hook member.



